

Praveen Thanikachalam

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Skills

- DSA | JavaScript | TypeScript | Python | C | Node | Express | NextJs | ReactJs | Bootstrap | Tailwind | Redux | jQuery | SQL | NoSQL |
- MongoDB | Prisma | Git | ROS - Robot Operating System | Localization and Navigation of Self Driving Vehicles
- Machine learning | Frontend | Backend | Web3 | Full-Stack | English, Tamil – *All professional proficiency or above*

Projects

Software Engineering

E Commerce Web app

- Developing an ECommerce website, based on selling clothes and other ornaments.
- Tech Stack : Nodejs , Reactjs , Redux , MongoDB.
- Underdevelopment, Deployment will be soon.

Joke App using External API Call

- Developed a Joke Web App that fetches jokes from API, based on inputs in different categories like Misc, Programming, Dark.
- TechStack : Nodejs , Ejs , MongoDB .
- Project Link : https://github.com/PraveenThanikachalam/JokeAPI_WebApp

NextAuth - MMD

- A Social Media App where group of directors and assistant directors can interact and get support in various fields in film making
- TechStack : NextJs, Prisma, MongoDB, Nextauth .
- Project Link : <https://github.com/PraveenThanikachalam/mmdApp>

AI and Robotics

3 DOF Robot Manipulator

- Developed a 3 Degree of Freedom Robot arm using ROS, Python, and Moveit Plugin.
- Proficient in integrating Dynamixel servos for precise and coordinated movements.
- Strong problem solving abilities and a passion for creating innovative solutions in the field of robotics and automation.
- Also I developed a web app to control the robot remotely using internet requests from everywhere.
- From this project I gained the knowledge and skill in connecting the MERN backend with the ROS server.

Autonomous Self Driving Robot

- Developed an autonomous robot which can navigate using LIDAR and running the ROS platform.
- Raspberry Pi is used for the server hosting nodes for the communication of various topics from the ROS to the LIDAR and the motor driver.
- From this project I gained knowledge and skilled in algorithm development, sensor integration and system optimization.
- I am Tensorflow for developing an AI model for avoiding obstacles while on the road or in a new work environment.

Advanced PCB Defect Detection AI Model

- Developed an AI model to detect the defects in PCB - (Printed Circuit Boards) and I succeeded with the accuracy of 98%.
- From this project I learned and got skilled in data preprocessing and optimization to create an accurate AI model.

Education

Bachelor of Engineering

Sri Ramakrishna Engineering College

Coimbatore,
TamilNadu

2021 - 2025

- Major in Robotics and Automation (Current year of studying : 3rd) (Pre-final year)

Mentorship

- Campus Roboclub Secretary , Secretary of Microsoft Learning Student Ambassadors
- Freelancer and Educator in Full Stack Development through workshops

Others

- **Gold Award:** Won First Place in Internal Hackathon